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A Proposition of Integral Protological Narrative: the Theological Criteria of Humanity and Anthropogenesis according to Empirical Sciences

Introduction

When theology meets empirical sciences, tensions or even open conflicts may arise. The most probable reason for such disagreements is a serious methodological error on one or both sides[2] as a thorough and honest examination of two "Books": of Revelation and of Nature should not lead to contradictory conclusions, but to the one Truth.[3] Many controversies of this kind between

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[2] The most frequent cause of conflict is probably misinterpretation of data or working with incomplete data on the part of empirical sciences, and incorrect reading of the Revelation on the part theology. On the other hand, the Pastoral Constitution *Gaudium et spes* (no. 57) brought up the problem of "a certain exclusive emphasis on observable data, and an agnosticism about everything else" by modern sciences. Also, as quoted by Andrzej Anderwald, St. John Paul II urged theologians to draw conclusions from the Galileo's case and warned against reduction of the sciences to their pragmatic goals and also against elevation of the sciences to the axiological status. Polish pope also indicated that the observance of epistemological rules when comparing the Biblical and scientific statements is a *conditio sine qua non* of proper theological-scientific relations. John Paul II also indicated some other possible sources of conflict: interference of the ecclesiastical institutions in the process of a scientific progress, and overlooking the methodological differences. See: A. Anderwald, *St. John Paul II' Ideas of Dialogue Between the Church and Science*, "Roczniki Teologiczne" 63 (2016) no. 9, pp. 83–89.

[3] See John Paul II, *Encyclical Letter "Fides et Ratio"* (1998), https://www.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_14091998_fides-et-ratio.html [accessed 10.1.2022], no. 19; cf. M. Heller, *Nauka i Teologia – niekoniecznie tylko na jednej planecie*, Kraków 2019, pp. 40–41.

theology and empirical sciences have arisen over problems related to protology. One of the protological issues that does not appear to be satisfyingly explored, and therefore may cause difficulties and disagreements, is that of anthropogenesis. For this reason, in this study we will cover the origins of mankind from two perspectives, of theological anthropology and of empirical science. In particular, the issue of theological criteria of humanity will be covered and confronted with the results of paleoanthropology and paleoarchaeology in the field of anthropogenesis and the earliest history of mankind. The term "criteria of humanity", used in this paper, describes a set of qualities of a creature who transcends the limits of the animal world, and thus can be defined as a human being. The manifestation of these features by a being signifies that it has exceeded the threshold of hominization. The "threshold of hominization" is another term proposed in this paper, denoting the "anthropological border" that separates human beings from other creatures.

Comparison of the theological criteria of humanity with the data on the origins of mankind provided by empirical sciences (especially paleoanthropology and paleoarchaeology), should allow us to harmonize the positions of faith and science in the field of anthropogenesis. Moreover, it should also allow to speculate at what stage of evolution the members of genus *Homo* could have displayed features that allow them to be identified as humans by the criteria of theological anthropology. To make aforementioned juxtaposition of theological and empirical perspectives possible, this study will be structured as follows:

1) in the first section, the theological criteria of humanity have to be covered. We will examine the most important aspects of the issue, focusing on biblical data, and corroborating our findings with the authority of contemporary biblical scholars and theologians;
2) in the second part of the article, an outline of the current state of knowledge of specific sciences on the origin of the human race and the earliest days of mankind based on paleoanthropological and archaeological evidence will be presented;
3) in the third section, we will supplement findings on the criteria of humanity from the previous points with data provided by cognitive science and evolutionary psychology. Then, we will try to juxtapose it with all of the previous findings, in attempt to construct integral, protological narrative about crossing the hominization threshold, in which the position of Christian faith and knowledge on the origins of humanity provided by detailed sciences would be harmonized.

We are aware that our proposition to juxtapose the content of theological anthropology with the results of empirical sciences may be controversial, particularly for supporters of absolute division of competences between theology and

other sciences (non-overlapping magisteria).[4] It should be noted, however, that the position of non-overlapping magisteria is only one of the possible approaches to the relation between theology and natural science.[5] In this study we adopt a different stance, trying to integrate (harmonize) the findings of theological and empirical research, while maintaining the methodological specificity of the relevant disciplines. Such a stance should make the aforementioned integral approach to the problem of the origins of humanity possible.[6]

Before proceeding further however, a short digression on the relationship between theology and the natural sciences shall be made. In this excursus, the possibility of the reconciliation of the position of faith and science would be proven with an example of the issue of biological evolution. It should be noted that the Magisterium of the Catholic Church, unlike some other Christian denominations that are interpreting the Bible with a fundamentalistic approach, gradually took the achievements of specific sciences into account. This was the case with the issue of the evolutionary origin of the human species – the position of Catholic Church, slowly but surely, accommodated to the progress of science. This can be noted by reviewing the doctrinal documents of the Church and papal statements on the biological evolution, the content of which has gradually changed over the decades: from cautious statements that the Catholic faith does not have to contradict the theory of biological evolution,[7] to statements that the achievements of biological sciences researching evolution resulted in "something more than just a hypothesis,"[8] and finally ending with full approval and recognition

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[4] See M. Heller, *Nauka…*, pp. 41–47.

[5] See A. Anderwald, *Teologia a nauki przyrodnicze. Rola wiedzy przyrodniczej w dociekaniach teologicznych*, Opole 2007, pp. 38–46; M. Heller, *Nauka…*, pp. 41–55.

[6] See A. Anderwald, *Teologia…*, pp. 44–45; cf. M. Heller, *Nauka…*, pp. 51–55.

[7] Such a position was to be expressed by Pius XII in his speech from 1941, according to J. Salij (idem, *Pochodzenie człowieka w świetle wiary i nauki*, in: *Kontrowersje wokół początków człowieka*, red. G. Bugajak, J. Tomczyk, Katowice 2007, p. 280; the mentioned speech was probably given to the Pontifical Academy of Sciences on 30.11.1941 [Pius XII, *30 November 1941 'God the Only Commander and Legislator of the Universe' Address to the Plenary Session of the Academy*, in: *Papal Addresses to the Pontifical Academy of Sciences 1917–2002 and to Pontifical Academy of Social Sciences 1994–2002*, Vatican City 2003, pp. 91–99]); and then in encyclical letter *Humani generis* (Pius XII, *Encyclical Letter "Humani Generis"* (1950), http://www.vatican.va/content/pius-xii/la/encyclicals/documents/hf_p-xii_enc_12081950_humani-generis.html [accessed 10.1.2022]).

[8] John Paul II, *Message addressed to the members of Pontifical Academy of Sciences 22.10.1996*, in: *Papal Addresses to the Pontifical Academy of Sciences 1917–2002 and to Pontifical Academy of Social Sciences 1994–2002*, Vatican City 2003, pp. 370–374. It is worth noting that, as early as 1939, the Polish dogmatic theologian A. Słomkowski stated that the theory of evolu-

of the competence of empirical sciences in this field.[9] The current position of the Magisterium of the Church towards the theory of biological evolution shows that the Magisterium recognized the competence of empirical sciences to explain the biological details of the emergence of species, including anthropogenesis. Simultaneously, it emphasizes that, from a theological perspective, it is crucial to recognize God's role in this process,[10] acknowledge the purposefulness of evolution,[11] and note the radical difference between man and the remaining "products" of evolution.[12] The above example of the gradual adaptation of the position of the Church's Magisterium towards the issue of biological evolution proves that the disagreements between theology and natural sciences can be solved as long as both sides are open for dialogue and the competences of individual areas of knowledge are respected. It is also worth noting that the process of resolving such a conflict may be gradual and lengthy, as in the above case.

1. Theological criteria of humanity based on biblical data

As the aforementioned example of the attitude of the Magisterium of the Church towards the issue of biological evolution proves, it is possible to solve the disagreements between theology and natural sciences. Therefore, we will make an attempt to juxtapose the theological criteria of humanity with the findings of paleoanthropology and paleoarchaeology in order to harmonize the perspectives of faith and specific sciences. To make it possible, it is first necessary to briefly review the most important data from the field of theological anthropology. It will allow us to propose some theological criteria of humanity (i.e. the features of the human being) as they may be established on the Christian revelation. Due to the limitations of the volume of this paper, we will limit the sources of this review to the biblical data.

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tion does not contradict the Catholic faith – see. A. Słomkowski, *Z przeszłości człowieka. Pewniki i dowolne przypuszczenia*, "Teologia Praktyczna" 1 (1939) no. 3, pp. 187–198.

[9] See e.g. Francis, *Encyclical Letter "Laudato si'"* (2015), https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html [accessed 10.1.2022], no. 18; 81; idem, *Address of His Holiness Pope Francis on the Occasion of the Inauguration of the Bust in Honour of Pope Benedict XVI 27.10.2014*, http://www.vatican.va/content/francesco/en/speeches/2014/october/documents/papa-francesco_20141027_plenaria-accademia-scienze.html [accessed 10.1.2022].

[10] See Francis, *Address…*; International Theological Commission*, Communion and Stewardship: Human Persons Created in the Image of God* (2004), https://www.vatican.va/roman_curia/congregations/cfaith/cti_documents/rc_con_cfaith_doc_20040723_communion-stewardship_en.html [accessed 10.1.2022].

[11] See John Paul II, *Message…*

[12] See Francis, *Encyclical Letter…*, no. 18; 81.

The most recent anthropological document of the Pontifical Biblical Commission[13] is entitled with a quote taken from the Psalm Eight, the fifth verse of which contains a rhetorical question, "What is man that you are mindful of him, and a son of man that you care for him?"[14] This short passage from the Book of Psalms seems to express the fundamental truth about man: the identity and uniqueness of the human person is based on the relationship with the Creator, who takes special care of His creation.[15] The unique relationship between God and man begins with the act of creation, as the narrative of the first chapters of the Book of Genesis tells. Those initial pages of the Scripture are, in a way, an interpretative key to the entire message of the Bible, including its anthropology.[16]

At this point, a brief digression about the name of Adam in the biblical narrative is required. The biblical name "Adam" denotes not only the individual protagonist of the biblical narrative but also a human being in the generic sense, and the mankind in the collective sense.[17] According to some oldest theological traditions,[18] corroborated by modern authors,[19] the biblical figure of Adam is a personification of all mankind, and thus everything that the Scriptures tell about Adam can be applied to the entire human race.[20] Therefore, the narrative of the creation of Adam (mankind) should be considered the most basic source of essential truths in the field of theological anthropology.

According to the first chapters of the Book of Genesis, the divine act of bringing man into existence is unique, if compared with creation of all remain-

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[13] Papieska Komisja Biblijna, *Czym jest człowiek? Zarys antropologii biblijnej*, tłum. H. Witczyk, Kielce 2020.

[14] See also Ps 144:3. All biblical citations from *New American Bible Revised Edition* (United States Conference of Catholic Bishops, 2011) [online version:] https://bible.usccb.org/bible [accessed 10.1.2022]), unless stated otherwise.

[15] Cf. Papieska Komisja Biblijna, *Czym jest człowiek…*, no. 10; 15; see also Gaudium et spes, no. 12.

[16] See *Międzynarodowy komentarz do Pisma Świętego. Komentarz katolicki i ekumeniczny na XXI wiek*, red. W.R. Farmer et al., Warszawa 2000, pp. 264–265; Cf. Z.J. Kijas, *Początki świata i człowieka*, Kraków 2004, pp. 68–69.

[17] It is confirmed particularly in Gen 5:1–2: "This is the book of the generations of Adam. In the day that God created man, in the likeness of God made he him; […] and blessed them, and called their name Adam, in the day when they were created". Fragment cited from King James Version, as majority of Catholic English editions of the Bible translates the word "Adam" (that exists in Hebrew original) in those verses as "man" or "mankind".

[18] See M. Przyszychowska, *Wszyscy byliśmy w Adamie. Jedność ludzkości w Adamie w nauczaniu ojców Kościoła*, Poznań 2013, pp. 27–46.

[19] See e.g. J. Ratzinger, *Wprowadzenie do chrześcijaństwa*, tłum. R. Biel, M. Górecka, (Opera Omnia IV), Lublin 2017, p. 200.

[20] See Papieska Komisja Biblijna, *Czym jest człowiek…*, no. 19; cf. *Międzynarodowy komentarz…*, p. 279.

ing species.[21] Although man, like all other creatures in this world, was brought into existence from the matter of the Earth,[22] he is radically distinguished from them by being created in the image and likeness of the Creator (Genesis 1:26–27; 5:1),[23] which results in having a personal character.[24] According to the Pontifical Biblical Commission, those features mark the man's mission on the Earth, that is to represent the invisible and eternal God in material and temporal reality. To perform this task, man has been given qualities unknown among other creatures, such as: reason, freedom, and the ability to enter into interpersonal relationships, especially into a relationship with the Creator.[25] Capability of entering interpersonal relationships seems to be imprinted into human nature at its creation as human beings were brought into existence as men and women (cf. Gen 1:27; 5:2). Moreover, a human being is unable to find fulfillment in relation to anything else in this world than the other person[26] since only another person is able to respond to the human need for interpersonal relation.[27] In addition to the ability to engage into relations, the personal character of a human being is also manifested in the ability to show love to others and to resist evil.[28]

The aforementioned qualities of the human being result in another one: humans as the only beings in this world are ethical creatures.[29] The ability to perform moral choices and accept responsibility for own actions reveals man's resemblance to the Creator.[30] The description of the Garden of Eden and its trees in the Book of Genesis (see Gen 2:8–16) and the following narrative about the first sin and the fall of man (Gen 3), as well as other passages of Scripture,[31] seem to convey the truth that the human moral life emerges from the relationship with the

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[21] See J. Lemański, *Księga Rodzaju. Rozdziały 1–11. Wstęp, przekład z oryginału, komentarz*, *Nowy Komentarz Biblijny. Stary Testament*, vol. I, part 1, Częstochowa 2013, p. 165; S. Łach, *Księga Rodzaju. Wstęp, przekład z oryginału, komentarz*, Poznań 1962, p. 192; J.S. Synowiec, *Początki świata i ludzkości według Księgi Rodzaju*, Kraków 2001, pp. 35–36.

[22] See Gen 2:7, "the Lord God formed the man out of the dust of the ground", cf. Gen 2:19: "The Lord God formed out of the ground all the wild animals".

[23] See Gaudium et spes, no. 14–17; J. Lemański, *Księga Rodzaju…*, p. 169.

[24] See M. Basiuk, *Człowiek – obraz Boga. Rdz 1,26–27 w kontekście Starego i Nowego Testamentu*, in: *Genesis 1–3. Tekst, interpretacje, przemyślenia*, red. Z. Pawłowski, Toruń 2009, pp. 52–54.

[25] See Papieska Komisja Biblijna, *Czym jest człowiek…*, no. 46.

[26] Gen 2:20, "The man gave names to all the tame animals, all the birds of the air, and all the wild animals; but none proved to be a helper suited to the man". Cf. Papieska Komisja Biblijna, *Czym jest człowiek…*, no. 153; J.S. Synowiec, *Początki…*, p. 113; cf. Gaudium et spes, no 12.

[27] See *Międzynarodowy komentarz…*, pp. 279–280; T. Jelonek, *Biblijna historia zbawienia*, Kraków 2004, pp. 47–48.

[28] J.S. Synowiec, *Początki…*, p. 45; see also Z.J. Kijas, *Początki…*, pp. 71–73.

[29] See Gaudium et spes, no. 15–17; Cf. T. Jelonek, *Biblijna historia zbawienia…*, pp. 43–44.

[30] *Międzynarodowy komentarz…*, p. 279; see also J. Lemański, *Księga Rodzaju…*, p. 179.

[31] See e.g. John 15:26, Phil 2:15, Sir 17:7; and also John 3:21, 1 Thess. 5:5–8.

Creator, who is the source of all moral values, and reveals (in the Holy Spirit) the principles of conduct that lead to the fullness of life.[32] However, man, tempted by the devil, opted for absolute moral autonomy, rejecting God's laws and trying to become like his Creator (Gen 3:5). Thus, man broke the life-giving relationship with God, destroying the state of harmony with the world and in oneself.[33] It should be noted that the relationship with God (in Jesus Christ) is presented in the New Testament as the ultimate goal and meaning of human life, also in the eschatological aspect. This is evidenced particularly in John 17:3, "this is eternal life, that they should know you, the only true God, and the one whom you sent, Jesus Christ". Through an intimate relationship with God, man has the possibility of exercising his likeness to the Creator.[34]

To sum up this brief review of biblical data, it can be concluded that the act of creation of man was unique among the whole of creation, and that the "product" of this act is distinguished from the natural world with a set of features determining its personal character. The most important of these features can be summed up as follows:

1) Man, as created in the image of God, bears the likeness of the Creator.
2) This similarity is revealed in the qualities of reason and free will.
3) Human, being a person, is able to enter into relationships, and in particular into a relationship with the Creator, in which the human being finds the ultimate fulfillment.

It seems that the most important of the aforementioned qualities is the capability of engaging into the relationship with God. This thesis seems to be confirmed by the Second Vatican Council. Fathers of the Council recapitulated the issue as follows:

> The root reason for human dignity lies in man's call to communion with God. From the very circumstance of his origin man is already invited to converse with God. For man would not exist were he not created by Gods love and constantly preserved by it; and he cannot live fully according to truth unless he freely acknowledges that love and devotes himself to His Creator.[35]

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[32] See *Katolicki Komentarz Biblijny*, ed. R.E. Brown, J.A. Fitzmyer, R.E. Murphy, tłum. K. Bardski et al., Warszawa 2004, p. 17; Papieska Komisja Biblijna, *Czym jest człowiek…*, no. 275; C.S. Bartnik, *Dogmatyka katolicka*, vol. I, Lublin 2009, pp. 304–305.

[33] See CCC, no. 397–398; Gaudium et spes, no. 13; *Międzynarodowy komentarz…*, p. 280; *Katolicki Komentarz Biblijny…*, p. 18; P. Jaskóła, *Bóg rzekł i stało się. Zarys protologii*, Opole 2018, p. 21.

[34] See e.g. 2 Cor 3:18; cf. Rom 8:29; Col 3:10; 1Cor 15:45–49. See also H. Langkammer, *Komentarz teologiczno-pastoralny wszystkich listów św. Pawła Apostoła z okazji roku świętego Pawła*, Legnica 2011, p. 281. Cf. also CCC, no. 27.

[35] Gaudium et spes, no. 19.

Our findings seem to be also compatible with the thought of some contemporary theologians, but, due to the limitations of this paper, we cannot elaborate further on their opinions.[36]

We will attempt to use the abovementioned qualities of human being in our efforts to establish a connection between theology and specific sciences. If we assume that these are the theological criteria of humanity, then we can try to speculate which of the prehistoric "ancestors" of modern humans could have met those criteria. To make it possible, we will first need to review data on the origins of mankind provided by specific sciences. It should be noted that this type of an integral approach to the matter of anthropogenesis is not entirely unprecedented in contemporary theological thought, also among Polish authors, such as Grzegorz Bugajak, who takes a similar approach, but comes to completely different conclusions.[37] Taking it into account, we can state that our endeavor to obtain theological-empirical narrative appears to be justified, even if controversial.

2. The origins of mankind according to the empirical sciences

After a brief recapitulation of the theological criteria of humanity, based on biblical sources, we will now proceed to the presentation of the summarized achievements of empirical sciences regarding the emergence of genus *Homo* from the animal world, the process of evolution that led to modern humans and their earliest prehistory. The following review is, out of necessity, brief and simplified. It reflects, however, the most important findings of paleoanthropologists and paleoarchaeologists up to date.

The presentation of data on the emergence of the human race should begin at the point in the timeline of the human evolution, in which, according to anthropologists, a branch that led to modern humans emerged from the phylogenetic tree of the family *Hominidae*. Contrary to some popular beliefs, humans are not "descended from monkeys" in the sense that our species is not descended from any of the species of contemporary living great apes such as gorillas, orangutans, and chimpanzees. However, we share with them "common ancestors" in the evolutionary sense. The "family tree" of mankind can be derived from such a "common ancestor" of man and all great apes, species that lived ca. 12 million years ago. Later, about 4 to 6 million years ago, lived the last common ancestor

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[36] Cf. e.g. C.S. Bartnik, *Dogmatyka katolicka…*, vol. I, pp. 17 et seq., 379 et seq.; G.L. Müller, *Dogmatyka katolicka*, tłum. W. Szymona, Kraków 2015, pp. 141 et seq., cf. L.F. Ladaria, *Wprowadzenie do antropologii teologicznej*, tłum. A. Baron, Kraków 1997, pp. 57–74.

[37] See G. Bugajak, *„Adamie, gdzie jesteś?". Kilka uwag o istocie człowieczeństwa*, in: *Teologiczna, filozoficzna i naukowa wizja człowieka*, red. P. Moskal, Lublin 2018, pp. 83–98.

of humans and chimpanzees – their closest living "relatives".[38] The "branch" that lead to a modern humans featured multitude of species classified by researchers into the taxonomic sub-tribe of *Hominina*, which contains the genus *Homo.* Over the generations, the beings emerging from this lineage have changed their way of life from arboreal to living on the plains and their way of locomotion from monkey-like brachiative to more human – walking on two legs, in an upright posture. Researchers do not agree as to what kind of factors caused this radical change, and various theories, in which scholars try to explain this process, are presented.[39]

The earliest primates that exhibited such external features as bipedal locomotion and the upright posture were probably of the genus *Ardipithecus*, and then *Australopithecus*. Species of these genera inhabited Africa between 4 and 2 million years ago.[40] These creatures, although they were already capable of using primitive tools, were – compared to humans – of small stature and can be described as having both "human" and "ape-like" features.[41] According to anthropologists, the genus *Homo* is most likely descended from one of the *Australopithecus* species.[42]

The next human "ancestor" on this branch of the "family tree" of mankind was *Homo habilis* (lat. *able man* or *skillful man*), species that existed between 2.4 to 1.4 million years ago. Representatives of the *H. habilis* species exhibited more "human" features than *Australopithecus*, and were able to make tools. They still resembled, however, their "predecessors" more than they resembled modern humans, therefore some researchers prefer to include them in the genus *Australopithecus* rather than *Homo*.[43]

Scholars agree, however, that another important species – *Homo erectus* (lat. *upright man*) – should be certainly classified into the genus *Homo.* Members

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[38] See M. Ryszkiewicz, *Homo sapiens. Meandry ewolucji*, Stare Groszki 2013, pp. 46–47; K.A. Kaszycka, *Pochodzenie i ewolucja człowieka*, "Kosmos" 58 (2009), no. 3–4, p. 559.

[39] See e.g. M. Ryszkiewicz, *Homo sapiens…*, pp. 228–236, 255–258, 277–280, 292–294; A.C. Hardy, *Was Man More Aquatic in the Past?*, "New Scientist" 7[174] (1960), pp. 642–645; E. Morgan, *The Aquatic Ape Hypothesis*, London 2011; C.O. Lovejoy, *The Origin of Man*, "Science", 211[4480] (1981), pp. 341–350.

[40] See I. Tattersal, *Dzieje człowieka od jego początków do IV tysiąclecia p.n.e.*, tłum. E.K. Suskiewicz, Warszawa 2010, pp. 56–57, 63–64; M. Ryszkiewicz, *Homo sapiens…*, pp. 68–69.

[41] See S. Semaw, P. Renne, J.W.K. Harris, *2.5-million-year-old stone tools from Gona, Ethiopia*, "Nature" 385[6614] (1997), pp. 333–336; S.P. McPherron et al., *Evidence for stone-tool-assisted consumption of animal tissues before 3.39 million years ago at Dikika, Ethiopia*, "Nature" 466 [7308] (2010), pp. 857–860; I. Tattersal, *Dzieje…*, pp. 66–75.

[42] H.M. Dunsworth, *Origin of the Genus Homo*, "Evolution: Education and Outreach" 3 (2010), pp. 353–366, https://doi.org/10.1007/s12052-010-0247-8 [accessed 10.1.2022].

[43] Smithsonian National Museum of Natural History, *Homo habilis*, in: *What does it mean to be human?*, https://humanorigins.si.edu/evidence/human-fossils/species/homo-habilis [accessed 10.1.2022].

of this species existed on Earth in between 1.89 million to 110 thousand years ago.[44] They were similar to modern people in terms of the body structure, its proportions and size. They also had a larger brain than antecedent species.[45] The behavior of *H. erectus* also testified of the progress: not only did they manufacture tools and were skillful hunters, but they were also the first creatures on Earth that learned how to use fire.[46] *H. habilis* were probably the first members of the genus Homo to leave Africa, giving rise to many waves of migrations beyond this continent (migrations started ca. 2 million years ago).[47] From the populations of *H. erectus*, which remained in Africa during the first migrations (researchers classified them as a *Homo ergaster* species or subspecies), descended the line leading to the emergence of *Homo sapiens*.[48] Aforementioned waves of migration from Africa led to development of several species or subspecies of genus *Homo* that coexisted with *H. sapiens*.

The last common ancestor of *H. sapiens* and the aforementioned other, coexistent species of genus *Homo*, was *Homo heidelbergensis*, named after the site where its fossil remains were discovered. Members of the *H. heidelbergensis* species lived from 700,000 to 200,000 years ago and in many ways closely resembled modern humans.[49] They created much more advanced tools than their "predecessors", and also erected the oldest known residential constructions.[50] It is possible that they communicated with some kind of primitive speech,[51] and also – according to some researchers – they could have displayed symbolic, and possibly even religious behaviors, but there is no consensus between paleoarchaeologists in this respect.[52] As

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[44] The timespan of *H. erectus* existence on Earth was the longest of all of known hominids and its populations coexisted with other, more "advanced" members of the genus *Homo.* See I. Tattersal, *Dzieje…*, pp. 88–89.

[45] See ibidem, pp. 84–84; Smithsonian National Museum of Natural History, *Homo erectus*, in: *What does it mean to be human?*, https://humanorigins.si.edu/evidence/human-fossils/species/homo-heidelbergensis [accessed 10.1.2022].

[46] See M. Kaplan, *Million-year-old ash hints at origins of cooking. South African cave yields earliest evidence for human use of fire*, "Nature (News)" 2.4.2012, https://www.nature.com/news/million-year-old-ash-hints-at-origins-of-cooking-1.10372 [accessed 10.1.2022].

[47] See K.A. Kaszycka, *Pochodzenie…*, p. 562.

[48] See I. Tattersal, *Dzieje…*, p. 88.

[49] See L.T. Buck, C.B. Stringer, *Homo heidelbergensis*, "Current Biology" 24 (2014) no. 6, pp. 214–215; I. Tattersal, *Dzieje…*, pp. 99–102.

[50] See J. Wilkins, B.J. Schoville, K.S. Brown, M. Chazan, *Evidence for Early Hafted Hunting Technology*, "Science" 338 [6109] (2012), pp. 942–946.

[51] The structure of the examined skulls of *H. heidelbergensis* indicates that they may have had speech organs somewhat similar to modern humans but not as developed – see I. Tattersal, *Dzieje…*, pp. 98–100.

[52] See A. Szyjewski, *Etnologia religii*, Kraków 2008, pp. 184–186; E. Carbonell, M. Mosquera, *The emergence of a symbolic behaviour: the sepulchral pit of Sima de los Huesos, Sierra de Atapuerca, Burgos, Spain*, "Comptes Rendus Palevol" 5 (2006), no. 1–2, pp. 155–160.

we have already noted, from *H. heidelbergensis* descended both *H. sapiens* and other coexistent species. One of these *Homo* that shared the Earth with early humans, were the *Homo neanderthalensis* (Neanderthals).

Contrary to some popular and outdated opinions, the Neanderthals did not precede *H. sapiens* in the evolutionary line, but, as was mentioned above, emerged parallelly from *H. heidelbergensis* and coexisted with *H. sapiens*. However, because of the importance of this species, as they were the first species of genus *Homo* other than *H. sapiens* discovered, and due to some latest discoveries in paleogenetics, basic information on Neanderthals is worthy of being presented below. The timespan of *H. neanderthalensis'* existence on earth can be dated to the period from 400 to 30 thousand years ago. Descended from one of the populations of *H. heidelbergensis* that left Africa ca. 450–350 thousand years ago,[53] the Neanderthals colonized Europe and adapted to different climate and new living conditions. The typical representative of *H. neanderthalensis* was of much more robust build than modern humans. The bones of Neanderthals were thicker than those of *H. sapiens*. Neanderthals also differed from *H. sapiens* by having facial features such as a characteristic protruding browbone and a massive nose. Their behavior, however, was quite similar to the early *H. sapiens*. Paleoarchaeology has revealed that Neanderthals achieved some impressing inventions: it is known that they manufactured not only effective hunting weapons, but also various tools and clothes made from animal skins.[54] They also knew the basics of herbal medicine and wound treatment.[55] The most interesting in the context of the main issues covered in this study are, however, other paleoarchaeological findings. The artifacts were found that had no practical function at all, described by archaeologists as decorative, or perhaps even symbolic items.[56] It is also known that Neanderthals used ochre as a dye.[57] The most important, however, seem to be the discoveries of burials, which were likely effects of deliberate, and perhaps even ritual actions. Until recently, many scholars have denied the possibility that

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[53] See Smithsonian National Museum of Natural History, *Homo heidelbergensis*, in: *What does it mean to be human?*, https://humanorigins.si.edu/evidence/human-fossils/species/homo-heidelbergensis [accessed 10.1.2022].

[54] See A. Milks, D. Parker, M. Pope, *External ballistics of Pleistocene hand-thrown spears: experimental performance data and implications for human evolution*, "Scientific Reports" 9 (2019), no. 820, https://doi.org/10.1038/s41598-018-37904-w [accessed 10.1.2022]; B. Sørensen, *Energy use by Eem Neanderthals*, "Journal of Archaeological Science" 36 (2009) no. 10, pp. 2201–2205.

[55] See P. Spikins et al., *Living to fight another day: The ecological and evolutionary significance of Neanderthal healthcare*, "Quaternary Science Reviews" 217 (2019), pp. 98–118.

[56] See A. Szyjewski, *Etnologia religii…*, p. 195; D. Leder et al., *A 51,000-year-old engraved bone reveals Neanderthals' capacity for symbolic behaviour*, "Nature Ecology & Evolution" 5 (2021), pp. 1273–1282, https://doi.org/10.1038/s41559-021-01487-z [accessed 10.1.2022].

[57] See W. Roebroeks et al., *Use of red ochre by early Neandertals*, "PNAS" 6[109] (2012), pp. 1889–1894.

Neanderthal burials were ritual,[58] but latest discoveries confirm the thesis that representatives of *H. neanderthalensis* buried their dead as a part of symbolic, and perhaps even religious ritual – behavior very similar to that of *H. sapiens*.[59] Another similarity could have been the Neanderthals' ability to speech. Based on the study of fossil Neanderthal remains, scientists determined that *H. neanderthalensis* could have communicated using a language. Their language, however, probably did not resemble any extant or extinct *H. sapiens* languages.[60] Taking into account all the similarities between early humans and Neanderthals, it is quite controversial to classify *H. neanderthalensis* as different species or non-humans.[61] Latest paleogenetic discoveries, which we will discuss below, also lead to the conclusion that the Neanderthals were "closer" to *H. sapiens* than scholars thought in the past.

Some time after the emergence of the Neanderthals from one of the *H. heidelbergensis* migrations on the European continent, another species emerged from the African *H. heidelbergensis* populations. About 200 to 150 thousand years ago appeared creatures that were anatomically almost identical to modern humans, the *Homo sapiens*. They began to migrate out of Africa c.a. 50 thousand years ago to settle in Oceania, Europe, Asia, and finally in the Americas.[62] During their colonization of the continents, they encountered descendants of previous migrations. As the latest discoveries, possible due to the rapid progress of genetic research and development of method of obtaining fossil DNA from prehistoric *Homo* remains, revealed, members of *H. sapiens* species interbred with other species or subspecies of the genus *Homo*: Neanderthals,[63] Denisovans,[64] and at least one more species, traces of which were identified in the DNA of modern human populations.[65] Re-

[58] Cf. K.A. Kaszycka, *Pochodzenie…*, p. 564.

[59] Cf E. Pomeroy et al., *New Neanderthal remains associated with the 'flower burial' at Shanidar Cave*, "Antiquity" 94 (2020), pp. 11–26.

[60] See D. Dediu, S.C. Levinson, *Neanderthal language revisited: not only us*, "Current Opinion in Behavioral Sciences" 21 (2018), pp. 49–55; S. Johansson, *Language Abilities in Neanderthals*, "Annual Review of Linguistics" 1 (2015), pp. 311–332.

[61] Therefore, some researchers classify them as subspecies: *Homo sapiens neanderthalensis*, just as to modern humans, that are taxonomically classified as subspecies: *Homo sapiens sapiens* – see M. Hofreiter, *Drafting Human Ancestry: What Does the Neanderthal Genome Tell Us about Hominid Evolution? Commentary on Green et al.*, "Human Biology" 83 (2011), no. 1, pp. 1–11.

[62] See I. Tattersal, *Dzieje…*, p. 93.

[63] See R.E. Green et al., *A Draft Sequence of the Neandertal Genome*, "Science" 328[5979] (2010), pp. 710–722.

[64] The Denisovans were identified basing on scarce remains discovered in the Denisova Cave in Siberia – see D. Reich et al., *Genetic history of an archaic hominin group from Denisova Cave in Siberia*, "Nature" 468 (2010), pp. 1053–1060.

[65] See M. Mondal, J. Bertranpetit, O. Lao, *Approximate Bayesian computation with deep learning supports a third archaic introgression in Asia and Oceania*, "Nature Communications" 10 (2019), art. no. 246, https://www.nature.com/articles/s41467-018-08089-7 [accessed 10.1.2022];

search conducted on the human genome proves that modern humans, depending on their place of origin, may carry the "genetic heritage" of various species of the genus *Homo*[66] mentioned above.[67]

Regardless of the facts described above, it should be noted that, around 40,000 years ago, the archaic *H. sapiens* began to exhibit behaviors that could be described as identical with those of modern people.[68] The Cro-Magnon culture, that is dated by the researchers to that period, produced tools much more refined than those made by any of the preceding *Homo*. Moreover, some artifacts made by *H. sapiens* since that period can be undoubtedly described as prehistoric works of art, and are as expressive and elaborate as the art pieces of later centuries.[69] What is most important, considering the issues covered in this paper, many artifacts created by early *H. sapiens* were of clearly religious purpose. This proves that prehistoric *H. sapiens* have already developed religious beliefs.[70] It is also quite certain that they had some kind of beliefs in the afterlife, as evidenced by ritual burials discovered by archaeologists.[71] They also developed forms of social organization that made the later transition to a sedentary lifestyle possible.[72]

Taking into account recent discoveries in the fields of genetics and paleoarchaeology presented above, a conclusion can be drawn that the theological concept of a human being should not be synonymous with the taxonomic classification of *H. sapiens sapiens* species (the current taxonym of modern humans).[73] If it is not the belonging to the species (defined by genetic or anatomical features) that make a creature human, then there is a need for other criteria of humanity. There may be various concepts of these criteria, developed by philosophical anthropology and other humanities, but from the Christian perspective it is the creature's

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D. Xu et al., *Archaic Hominin Introgression in Africa Contributes to Functional Salivary MUC7 Genetic Variation*, "Molecular Biology and Evolution" 34 (2017), no. 10, pp. 2704–2715.

[66] See e.g. C. Stringer, *What makes a modern human*, "Nature" 485[7396] (2012), pp. 33–35.

[67] The discoveries made possible by the progress in the field of genetics also lead to the question whether it is fully justified to call Neanderthals and Denisovans extinct. Perhaps it should rather be said that they were, at least partly, assimilated into the *H. sapiens* population.

[68] See I. Tattersal, *Dzieje…*, pp. 129–130.

[69] The most famous examples of prehistoric art are the wall paintings of the Lascaux cave in France and Altamira cave in Spain – see J. Dębicki et al., *Historia sztuki. Malarstwo, rzeźba, architektura*, tłum. J. Dębicki, Warszawa 1998, pp. 6–7.

[70] See A. Szyjewski, *Etnologia religii…*, p. 224; J. Dębicki et al., *Historia sztuki…*, pp. 6–8.

[71] See I. Tattersal, *Dzieje…*, pp. 132–133.

[72] See ibidem, pp. 133–134, 138–167.

[73] It should be noted that the issue of the concept of species and speciation in connection to the origins of mankind presents difficulties in many areas, and there is no widespread consensus among the anthropologists on how to solve this issue (see J. Tomczyk, *Początki Homo sapiens a problem definicyjności gatunku*, in: *Kontrowersje wokół początków człowieka*, red. G. Bugajak, J. Tomczyk, Katowice 2007, pp. 98–111.

relation to the creator that makes it "human" (or a "person"). Moreover, an interesting question arises: should the taxonomic classification of *H. neanderthalensis* and other extinct members of the genus *Homo* as different species than *H. sapiens* result in perceiving those beings as non-humans? Features presented by these species, evidenced in the prehistoric artifacts, seem to suggest otherwise.

3. Relationality and religiosity of the first humans as a sign of crossing the hominization threshold

The data drawn from the brief review of anthropogenesis presented above and the outline of prehistoric species of the genus *Homo* should be now supplemented with data from humanities, such as cognitive sciences and evolutionary psychology, as well as with the testimonies of ethologists and primatologists. This will make it easier to relate the findings of specific sciences to the previously formulated theological criteria of humanity and enable further speculation about exceeding the threshold of hominization by the first humans.

Experts in the field of cognitive sciences and evolutionary psychology provide us with very interesting data related to the process of "emergence" of the first humans from the animal world and the radical difference between human beings and animals when it comes to relations. It turns out that it is the criterion of relationality that may constitute the uniqueness of man in the world of nature: the distinctiveness of the way that humans relate to each other. Abilities that may seem unique to humans, such as the use of tools,[74] ability to transform the surrounding environment,[75] and the ability to communicate, also occur in the animal world. As to the ability to communicate, however, there are radical differences between humans and animals that reveal a special dimension of human relationality. The research on communication with hominids is worth of noting in this regard. Primatologists managed to teach chimpanzees and gorillas the sign language.[76] The great apes not only learned signs, but have also gained ability to formulate complex expressions in the sign language and they were even capable of inventing new signs.[77] While these kinds of abilities may seem to blur the line separating humans and animals, cognitive scientists point some significant distinctions that make the way the humans communicate radically different from the animals. According to specialists, the unique feature that makes the communication between human beings unique, is that humans not only know how

[74] See e.g. Ch. Boesch, H. Boesch, *Tool Use and Tool Making in Wild Chimpanzees*, "Folia Primatol" 54 (1990), pp. 86–99.

[75] Evident for everyone who has seen dams and lodges erected by beavers.

[76] The anatomy of these hominids makes it impossible to articulate the spoken language.

[77] See A. Szyjewski, *Etnologia religii…*, pp. 139–144.

to coordinate our actions with the use of language, but also have the ability to communicate informatively. In other words, we do not only issue orders, persuading others to behave in a way that brings us benefits, what is typical for animal communication, but we also tend to inform others of what is beneficial for them.[78] This may result from the unique human ability to understand that another person may present a different perspective to a given object or situation.[79] Evolutionary psychologists claim that such abilities connected to the relational and social thinking capacity have been crucial in the development of the human species.[80]

Perhaps thanks to the abovementioned unique abilities, mankind was able to create culture, a phenomenon that is not present in any other species on our planet[81] as culture, by definition, is a social product, i.e. it is the product of people engaged in relations.[82] It should be noted that the aforementioned findings of evolutionary psychologists and cognitive scientists seem to correspond with the teaching of the Church's Magisterium on theological anthropology, which emphasizes that a human being, by its nature, is a social being. This statement can be found in the "Pastoral Constitution on the Church in the Modern World" of the Second Vatican Council, "by his innermost nature man is a social being, and unless he relates himself to others he can neither live nor develop his potential".[83]

In the light of the findings presented in the first point of this study, in which the most important theological criteria of humanity were recapitulated, the most important sign of exceeding the hominization threshold by a creature is probably its relationship with God. The question is: can this theological criterion can be related to the empirical sciences' data on the origins of humanity? While the findings of specific sciences on the role of interpersonal relations in the development of human species are quite exhaustive, it is much more difficult for those sciences to comment on the phenomenon taking place in the most intimate "core" of a human being,[84] that is the phenomenon of faith. This certainly applies to the prehistoric humans who left no written expressions that could evidence their religious experiences. The only evidence of a primal relationship of the proto-humans with God available to us are the prehistoric artifacts that, according to paleoanthropologists, were items of religious significance. Examples of such artifacts were presented in the previous point, noting that, according to scholars, many of these

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[78] See M. Tomasello, *Historia naturalna ludzkiego myślenia*, tłum. B. Kucharzyk, R. Ociepa, Kraków 2015, pp. 90–121.

[79] Ibidem, p. 83.

[80] See ibidem, p. 13 et seq.

[81] Cf. ibidem, pp. 144–164.

[82] See S. Czarnowski, *Kultura*, Warszawa 1958, p. 12.

[83] Gaudium et spes, no. 12.

[84] Cf. ibidem, no. 16.

items indicate that the prehistoric people who made them have already developed some kind of religious rituals.

Obviously, on the basis of material evidence, the "inner" religious life of prehistoric *Homo* can be only an object of speculation. The results of the research that ethologists and primatologists conducted on the behavior of chimpanzees and gorillas, however, provided some clues that allow for hypotheses regarding the proto-religiousness of the first people to be formulated. Researchers observed that the great apes exhibit behaviors that may be interpreted as pre-ritual or even pre-religious.[85] The most interesting data in this regard come from the aforementioned research on communication with primates, during which chimpanzees and gorillas that were taught the sign language signaled sentences the content of which may be interpreted as at least para-metaphysical. For example, a chimpanzee of the Bonobo subspecies signaled the question, "what do the chimpanzees do after death?". It later provided the answer to this question, "they go into a great black hole".[86] Similarly, a female gorilla, when asked what happens to gorillas after death, replied, "they go to a remote, comfortable burrow".[87] Such observations led some researchers to propose a thesis that mammals of the subgenus *Homininae* express a natural predisposition to protoreligious behavior.[88]

Therefore, it may be possible that the prehistoric representatives of the genus *Homo,* living at the time when the mankind emerged from the animal world, exhibited analogous innate proto-religious tendencies which, after being inspired by the God's Natural Revelation,[89] allowed for the primal relationship of the first humans with the Creator. A thesis could be put forward that the previously discussed symbolic and religious artifacts produced by the prehistoric *Homo* and the religious burials that they practiced, may be a testimony to their proto-religiosity, the original response of the first humans to the call of God.[90] This proto-religion of the first men was probably, from a modern point of view, relatively "primitive" and, as the Austrian theologian Raymund Schwager speculates, could have more emotional than rational character.[91] The religious life of the prehistoric *Homo* should not, however, be depreciated. Their faith, even if not fully reflective and not developed in the intellectual aspects, could contain

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[85] See A. Szyjewski, *Etnologia religii…*, s. 149–154.

[86] See ibidem, pp. 140–143.

[87] See ibidem.

[88] See ibidem, p. 154.

[89] Cf. CCC, no. 54–55; cf. Dei verbum, no. 6.

[90] Cf. CCC, no. 28, "Throughout history down to the present day, men have given expression to their quest for God in their religious beliefs and behavior: in their prayers, sacrifices, rituals, meditations, and so forth. These forms of religious expression, despite the ambiguities they often bring with them, are so universal that one may well call man a religious being".

[91] R. Schwager, *Grzech pierworodny i dramat zbawienia w kontekście ewolucji, inżynierii genetycznej i Apokalipsy*, tłum. J. Hanusz, Tarnów 2002, p. 109.

a relation to the Infinite Cause of life, analogously to the religious experience of mentally handicapped people who, despite their intellectual deficits, are capable of an intense religious life.[92]

The ritual practices of the prehistoric proto-religiosity were ethically and aesthetically ambivalent in terms of contemporary norms, and some would be even perceived as repulsive nowadays. An example of such prehistoric practice was the ritual endocannibalism, which involves a consumption of the deceased tribesmen body parts during a funeral rite.[93] It should be noted, however, that the meaning of this religious practice was completely different for prehistoric humans than for the representatives of contemporary Christian culture. From a theological and ethical point of view, it should also be remembered that, according to the teaching of the Church, sin had impacted mankind from its very beginning,[94] and the consequences of sin applied also to religious practices and rituals of early humans. Therefore, the thesis can be put forward that the original religious practices of the first people, although they often took on a grotesque form, as a result of a distortion by sin, can be seen as a testimony of the prehistoric humans' attempts to establish a relationship with God.

Taking all the above into account, the primal religious practices of the prehistoric *Homo* can be considered as a sign of their humanity, a testimony that they crossed the threshold of hominization and emerged from the animal world. It seems impossible to establish when exactly this turning point happened, i.e., when prehistoric *Homo* became prehistoric *Humans* (regardless of their taxonomic classification). We can only conclude on the basis of the material evidence that the representatives of both *H. neanderthalensis* and *H. sapiens* had already displayed behaviors which can be considered as signs of exceeding the threshold of hominization, while in the case of *H. heidelbergensis* and other, earlier members of the genus *Homo*, there is no evidence that would confirm beyond doubt any kind of religious, human-like activity.

Conclusions

On the basis of the findings included in the three main points of this paper, the following conclusions can be put forward:

1) It seems that it is possible to build integral narrative concerning anthropogenesis and the most ancient history of mankind that takes into account both the most important content of theological anthropology and the findings of specific sciences.

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[92] See ibidem, pp. 109–110.

[93] See D. Żychliński, *Endokanibalizm – rytualny posiłek jako element kultu przodków*, "Folia Praehistorica Posnaniensia" 23 (2018), pp. 231–243, https://doi.org/10.14746/fpp.2018.23.10 [accessed 10.1.2022].

[94] Cf. CCC, no. 401 et seq.

2) If the most important criterion of humanity, from the point of view of theological anthropology, is the human ability to relate with God (*capax Dei*), the signs of achieving this criterion can be recognized in prehistoric *Homo* genus by examination of material evidence provided by empirical sciences (particularly paleoarchaeology).
3) It does not seem possible to accurately determinate the stage of anthropogenesis at which the early creatures of the genus *Homo* crossed the threshold of hominization. In the case of *H. neanderthalensis* and *H. sapiens*, however, we have material evidence of their religious practices that seem to testify to the fulfillment of the most important theological criterion of humanity.
4) It is clear that the theological criteria of humanity and the theological concept of the human are not convergent with the taxonomic (biological) concept of species (in this case the *H. sapiens* species). Interestingly, the data of empirical sciences on anthropogenesis and prehistory of mankind suggest that the term of the *homo capax Dei* or *homo religiosus* can be applied not only to the prehistoric representatives of the species *H. sapiens*, but also to *H. neanderthalensis*[95] and, possibly, to other species of the genus *Homo*.
5) The approach to anthropogenesis and the prehistory of mankind in which one tries to take into account both the perspective of the Christian faith and the findings of specific sciences, can be extremely useful for Catholic protology, especially for the modern theology of original sin.[96]
6) The abovementioned integral approach incorporating both Christian theology and the findings of empirical sciences can also influence the interdisciplinary concept of person or human being. This perspective should be explored in further research of theological and philosophical anthropology.

We are aware that the integral narrative, combining the perspectives of theology and specific sciences, assumed in this study, as well as conclusions presented above, may be controversial for theologians who support the non-overlapping

[95] Interestingly, a Polish theologian, Jacek Salij, expressed an opinion similar to ours that the question whether the Neanderthals should be considered *humans* from the thelogical anthropology's perspective should be anwered positively, if only one could confirm that they were called by the Creator to the *everlasting friendship* (J. Salij, *Pochodzenie człowieka…*, p. 283).

[96] Covering the issue of proto-religiosity in relation to the problem of original sin in this paper was not possible due to its limited volume. Therefore, we can propose the following thesis for further research: the point in the evolution of the genus *Homo* in which its representatives initiated religious practices, testifies to their primal relationship with the Creator. If the first men were capable of relating to God, they must have also already been capable of a conscious choice between good and evil. This means that there was, at that time in the human evolution, a possibility of sin which had to be a rejection of the primal relationship with the Creator – see CCC, no. 197 et seq. Cf. P. Jaskóła, *Bóg rzekł…*, p. 99; Z.J. Kijas, *Początki…*, pp. 82–84.

magisteria model of relations between theology and other sciences. It may be controversial also for theologians that are fond of some particular, realistic interpretations of the Genesis creation narrative and protological dogmas. Given, however, how rare the endeavors for integral protological narrative are, we think that our research could be useful for some scholars, particularly those who explore issues of original sin and anthropology. It may also be helpful in the process of catechization, especially with regard to those recipients of catechesis who, due to their strong empirical view, find it difficult to receive the contents of Catholic protology. It should be noted that this paper does not exhaust the entirety of the problem presented in the introduction and should be rather perceived as a small, initial contribution to these otherwise unexplored issues.[97]

Propozycja integralnej narracji protologicznej: teologiczne kryteria człowieczeństwa i antropogeneza w ujęciu nauk empirycznych

Streszczenie

Spotkanie katolickiej protologii z odkryciami nauk szczegółowych w zakresie początków świata i człowieka było w przeszłości przyczyną wielu kontrowersji. Wydaje się jednak, że napięć tego rodzaju można uniknąć, budując integralną narrację protologiczną, uwzględniającą zarówno perspektywę wiary, jak i dorobek nauk empirycznych. Obecnie wydaje się konieczna próba zbudowania takiej narracji w zakresie antropogenezy i najdawniejszych dziejów człowieka, która uwzględniałaby zarówno najważniejsze aspekty antropologii teologicznej, jak i obecny stan badań paleoantropologii i paleoarcheologii. Może to zaowocować interesującymi wnioskami w kwestiach koncepcji osoby ludzkiej i kryteriów, jakie wyróżniają człowieka ze świata zwierzęcego.

Słowa kluczowe

protologia, antropologia, paleoantropologia, hominizacja, antropogeneza, religijność pierwotna, kryteria człowieczeństwa

Keywords

protology, anthropology, paleoanthropology, hominization, anthropogeny, prehistoric religion, criteria of humanity

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[97] In this study, we did not cover, for example, the issue of the theological dispute between the supporters of monogenism and polygenism that is related to the doctrine of original sin. It was once one of the important sources of serious disagreements between theology and natural sciences, however it has been exhaustively researched so far (see e.g. T.B. Łukaszuk, *Związek dogmatu grzechu pierworodnego z monogenizmem w katolickiej teologii ostatniej doby*, Warszawa 1976) and, according to some renown theologians, do not pose a problem anymore (see e.g. G.L. Müller, *Dogmatyka katolicka…*, pp. 184–185).

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